

ABSTRACT OF THE DISCLOSURE

Device for Producing of Electric Energy and of
Signal Transmitting Pressure Pulses

The invention is directed to a device for the generation of pressure pulses, being intended for transmitting signals, in a fluid-carrying channel (2), using a pulser (1) designed to be integrated in the channel (2) and having a housing (4) and an adjustable throttling device by means of which the flow resistance can be varied at at least one point of the channel (2), an electrical generator (16), an impeller (9) exposed to the fluid passing through the channel and designed to drive the generator (16), a control device by means of which the load of the generator (16) can be varied in response to control signals, and an actuating device that is connected to the throttling element (12) and effects an adjustment of the throttling element responsively to the driving torque of the generator (16).

The impeller (9) is axially movably mounted and yieldingly supported against the direction of fluid flow such that the supporting force of the yielding support (21) increases as the axial movement of the impeller (9) increases, and the throttling device includes an axially adjustable throttling element (12) that is coupled to the impeller (9) in such a way that the throttling element (12) is adjusted in the sense of increasing the throttling effect by an axial movement of the impeller in the direction of fluid flow.

(Fig. 1)